

**Railroad Fire Restoration Project**  
**Bass Lake Ranger District**  
**Sierra National Forest**  
**Madera and Mariposa Counties, California**  
**January 9, 2018**

## **Introduction**

The Bass Lake Ranger District (BLRD) of the Sierra National Forest (SNF) is beginning the environmental analysis process for the proposed Railroad Fire Restoration Project (Railroad Project). This project proposes activities within the vicinity of the Fish Camp, Sugar Pine and Cedar Valley communities to remove insect killed trees, remove roadside hazard trees, recover the economic value of bug killed and fire-killed (fire-damaged trees (collectively hereafter, fire-affected), and re-establish forested conditions. The total Railroad Project area is approximately 12,650 acres, of which approximately 3,000 acres are proposed for treatments. The participation of interested persons, state and local governments, and tribes is encouraged at this time and throughout the development of this project.

The Railroad Project is located approximately 6 miles northeast of Oakhurst, California, and south of South Entrance to Yosemite National Park within the BLRD of the SNF (figure 1). The legal description includes all or portions of: Township 5 South, Range 21 East, sections 23, 25, 26, 27, 33, 34, 35 and 36; T5S, R22E; sections 19, 20, 21, 22, 28, 29, 30, 32, 33; T6S, R21E; sections 1, 2, 3, 4, 10, 11, 12, 13, 15, 22; T6S, R22E; sections 4, 5, 6, 7, 8, 18 and 19; Mount Diablo Base Meridian. Refer to Map 1.

The Railroad Projects meets the purpose and need of Sections 602 and 603 of the Healthy Forests Restoration Act of 2003 (HFRA). The Railroad Project area is a designated Tier 1 tree mortality high hazard zone as designated under the Proclamation of a State of Emergency Executive Order 10-30-2015 by Governor Brown. The purpose of the project is to protect the health and safety of public workers and private citizens, capture remaining forest product economic value and benefit, preserve existing and develop future wildlife habitat, and reforest suitable portions of the landscape deforested by bug kill and the Railroad Fire. Prompt removal of bark beetle and fire affected trees will help to curtail future bug infestations, reduce the long term fuel loading, reducing future fire severity and reduce site preparation costs. The project would increase the ability to control fire which leads to the safety of the communities in the Wildland Urban Interface (WUI). Snag retention would provide wildlife habitat while fuels reduction would protect existing habitat from future fires. Reforestation would expedite the re-establishment of a forested landscape capable of providing a variety of wood products and wildlife habitat.

The removal of fire killed and drought induced mortality promotes the resiliency of residual stands that remain unburned, or burned under low and very low intensity. Residual trees found in low severity areas may still have green crowns and a higher potential for survival, but are still affected by fire. Defensive responses may not be adequate to pitch out attacking beetles as trees struggle to recover. Beetle attack success depends on reduced defensive capabilities of trees; the presence of Western pine beetle and other insects as found over the last four years can further weaken surviving trees, and reduce the resiliency of the remaining forest and landscape. The on-going insect infestation (<http://www.fire.ca.gov/treetaskforce> 2017) and current environmental conditions continue to present challenges to protect and promote resiliency across the landscape.

The Railroad Project proposed treatment areas will include the standards and guidelines (S&Gs) and direction contained in the SNF Land and Resource Management Plan (SNF LRMP) (1992a) as amended by the Sierra Nevada Forest Plan Amendment (SNFPA) Final Supplemental Environmental Impact Statement (FSEIS) and Record of Decision (ROD) (USDA FS 2004a, 2004b). It provides for ecosystem restoration following catastrophic events. These restoration activities are included in all land allocations and call for managing disturbed areas for long-term fuels, restoring habitat, and recovering the economic value of some dead and dying trees. Restoration projects can include salvage of dead and dying trees for economic value as well as for fuels reduction (USDA FS 2004b, page 6).

Under the SNFPA ROD errata (USDA FS 2004c), guidance of the SNFPA ROD (2004b, pages 52 and 53) clarifies salvage direction. Design projects to: 1) reduce potential soil erosion and the loss of soil productivity caused by loss of vegetation and ground cover; 2) protect and maintain critical wildlife habitat; 3) manage development of fuel profiles over time; and 4) recover the value of timber killed or severely injured by the disturbance (USDA FS 2004b, page 52).

## **Railroad Fire**

The Railroad Fire started in the afternoon on August 29, 2017 in the vicinity of the Yosemite Sugar Pine Resort located adjacent California State Highway 41 (CA-41) on the BLRD, SNF. The fire was contained on September 16, 2017, after burning approximately 12,700 acres. It was an immediate threat to four communities (Fish Camp, Sugar Pine, Cedar Valley and Calvin Crest), consumed insect high risk mortality areas, burned a portion of the Nelder Grove of the giant sequoias, and closed the south entrance to Yosemite National Park.

The Railroad fire burned in a mosaic of fire severity that included unburned, low, moderate, and high fire severity. As a result, there are areas where tree mortality is 100 percent while other areas still support a green tree component.

## Purpose and Need for Action

The purpose of the Railroad Project is to protect the health and safety of public workers and private citizens, capture remaining forest product economic value and benefit, preserve existing and develop future wildlife habitat, and reforest suitable portions of the landscape deforested by bug kill and the Railroad fire. Prompt removal of bark beetle and fire affected trees will help to curtail future bug infestations, reduce the long term fuel loading, thus reducing future fire severity and increasing the ability to control fire which leads to the safety of the community in the WUI, and reduce fuels reduction and site preparation implementation costs. Snag retention will provide wildlife habitat while fuels reduction will protect existing habitat from future fires. Reforestation will expedite the re-establishment of a forested landscape capable of providing a variety of wood products and wildlife habitat.

## Proposed Action

The Proposed Action is to treat up to approximately 3,000 acres of bug killed and moderate to high severity burn fire killed areas within the 2017 Railroad Fire perimeter. The following treatments are proposed:

1. Hazard tree removal for public safety along main vehicle travel routes/high public use areas within the fire perimeter. This includes removal of potential hazard trees along roads 5S37, 6S07, 6S90 and 5S18, (and others), and campgrounds, up to two tree length striking distance (approximately 300 feet) either side of roadway or route. Addition areas include developed recreation facilities: dispersed campsites, off-highway vehicle trails and other trails; clearing would consist of removing trees within one striking distance (approximately 150 feet) around facility or along trail.
2. Create defensible space within the designated wildland urban interface (WUI) areas around the communities and private facilities in the Sugar Pine Organization Camp, Sugar Pine, Cedar Valley, Calvin Crest, Fish Camp and Westfall Station. This treatment is intended to provide for and maintain managed fuel breaks in the WUI.
3. Salvage of merchantable timber harvest within the bug killed stands and moderate to high severity burn areas with an estimated volume of 10mmbf. Salvage harvests are proposed on slopes less than 35 percent. However, land designations, habitat, other land uses, and topography, shape the areas in which treatment can be proposed. Examples of treatment objectives and limitations in the Railroad fire perimeter include: dispersed and developed recreation areas, special use permit areas, fire fighter safety/wildland urban interface, northern goshawk (*Accipiter gentilis*) protected activity centers (PACs), California spotted owl (*Strix occidentalis occidentalis*) PACs, riparian conservation areas, suitable Pacific fisher (*Martes pennanti*) habitat, and other sensitive resource areas (e.g. cultural sites, suitable habitats for terrestrial and aquatic species). This also would reduce heavy fuel loading and open up reforestation areas within plantations and other previously forested areas burned by the fire.

Road maintenance, road reconstruction and temporary roads, skid trails and landings will be conducted as part of the salvage operations.

4. Restoration activities in bark beetle and fire killed stands consisting of conifer planting of affected conifer plantations and other previously forested areas lost to bug kill and moderate or high severity burn. This treatment is intended to facilitate the reforestation and development of wildlife habitat within the fire perimeter.

5. Design features or mitigation measures from the SNFPA ROD will be used to minimize impacts to forest resources including but not limited wildlife and botanical resources, cultural resources, vegetation, fuels, etc.

Potential salvage and restoration treatment areas have been broken down into 6 different categories:

- Biomass—predominately biomass material due to deterioration of dead trees
- Potential salvage—dead trees may be sufficiently sound for salvage removal for economic value
- Little to no salvage—generally plantations with smaller diameter trees—site prep/plant
- Possible salvage—access may be a problem—Old Grandad Fuelbreak west of Calvin Crest
- Spotty salvage—October 10th RAVG did not indicate large amounts of dead trees
- Roadside treatment—300 foot buffer (each side) along roads

All the above areas would be considered for site preparation and planting depending upon the extent of mortality and existing seed sources.

Description of each treatment category:

- Biomass—numerous unsalvageable dead trees greater than 10 inches dbh present. Dead trees will need to be felled and removed. If not removed, majority would need to be piled and burned. Smaller diameter dead trees would need to be felled prior to piling. Slash would need to be piled and burned. Piling might be accomplished using a tractor or grapple piled. Treated area would be planted if sufficient seed trees were not available or a known seed source is planned to be used (e.g. rust resistant SP, etc.).
- Potential salvage—merchantable material is present. Fell and remove merchantable material, remove biomass material or pile and burn biomass material if removal too costly. Smaller diameter dead trees would need to be felled prior to piling. Slash would need to be piled and burned. Piling might be accomplished using a tractor or grapple piled. Treated area would be planted if sufficient seed trees were not available or a known seed source is planned to be used (e.g. rust resistant SP, etc.).
- Little to no salvage—fell and pile or masticate dead trees. Burn piles. Plant.

- Possible salvage—fell and remove dead fuelbreak trees if feasible. If not feasible to remove, fell, pile and burn piles. Plant at slightly wider spacing for fuelbreak.
- Spotty salvage—pockets one acre or larger of dead trees which appear over the next few years. Fell and remove merchantable material, remove biomass material or pile and burn biomass material if removal too costly. Smaller diameter dead trees would need to be felled prior to piling. Slash would need to be piled and burned. Piling might be accomplished using a tractor or grapple piled. Treated area would be planted if sufficient seed trees were not available or a known seed source is planned to be used (e.g. rust resistant SP, etc.).
- Roadside treatment—initially appearing hazard trees will be felled and removed within 300 feet each side of the road edge through a hazard tree removal contract. Subsequent tree mortality would be felled and removed during a follow-up entry. Roads not included in the initial contract would be treated during the Railroad Fire project. Dead trees within 300 feet of all these roads would be felled. Smaller diameter dead trees would need to be felled prior to piling. Slash would need to be piled and burned. Piling might be accomplished using a tractor or grapple piled. Treated area would be planted if sufficient seed trees were not available or a known seed source is planned to be used (e.g. rust resistant SP, etc.).

Treatments in all these area would include felling of dead submerchantable size trees as well as unmerchantable larger diameter trees. Felling may be accomplished by hand, feller/buncher or mastication. Snags needed for wildlife that do not pose a safety hazard to the public or forest workers would be retained to the level specified in the LRMP. Slash concentrations would be tractor or grapple piled. Hand piling of slash concentrations would be undertaken on steep slopes. Piles would be burned. A combination of ponderosa pine, blister rust resistant sugar pine, and incense cedar seedlings would be planted in these site prepared areas. Natural seeding would take place in smaller openings or areas where sufficient seed trees of desired species are present. Hand release would be undertaken as needed to reduce competition.

## **Legal Compliance**

The Railroad Projects meets the purpose and need of Sections 602 and 603 of the Healthy Forests Restoration Act of 2003 (HFRA). The Railroad Project area is a designated Tier 1 tree mortality high hazard zone as designated under the Proclamation of a State of Emergency Executive Order 10-30-2015 by Governor Brown. This proposed action has been designed to meet the S&Gs for land management activities described in the SNF LRMP as amended by the SNFPA FSEIS and ROD.

## **Project Schedule**

Required NEPA Categorical Exclusion analysis is expected to be completed by March 2018, with the expected date to issue a decision memo in March 2018. Implementation is expected to start June 2018.

